

Abstract of the Invention

A pre-whirl generating apparatus (26) is provided that employs deformable air deflecting vanes (46) adjacent the inlet (18) of a radial air compressor (12-22), which vanes (46) can be mechanically deformed to generate positive, neutral, or negative pre-whirl flow to the compressor. A minimum number of parts are used to position one or more thin, deformable vanes (46) in the intake channel (34) leading to the compressor inlet (18). In their undeformed position, the vanes (46) do not deflect the incoming air, thereby causing little or no flow restriction. To achieve the desired positive or negative pre-whirl of flow to the compressor (12-22), the trailing edge (62) of the vanes (46) are deflected transverse to the direction of flow in the channel (34) in either the positive or negative direction.